



FOR MANY OF THE PRODUCTS WE USE ON A DAILY BASIS, WE KNOW VERY LITTLE ABOUT THE PROCESSES INVOLVED IN PRODUCING THEM. THIS BOOKLET HELPS DESCRIBE HOW PULP IS SUSTAINABLY PRODUCED AND MADE INTO PRODUCTS USED IN OUR DAILY LIVES. IT ALSO DESCRIBES HOW PALM OIL IS PROCESSED INTO A WIDE VARIETY OF PRODUCTS MANY OF WHICH END UP BEING SERVED ON OUR DINING TABLES EACH DAY.

A VARIETY OF COMPLEX PROCESSES ARE USED TO PRODUCE THESE PRODUCTS, TAKING ADVANTAGE OF MODERN TECHNOLOGY, WORLD-CLASS RESEARCH AND DEVELOPMENT, WELL-TRAINED HUMAN RESOURCES, SUSTAINABLE PRACTICES, AND PARTNERSHIPS WITH THE SURROUNDING COMMUNITIES.

IN DEVELOPING THESE PROCESSES AT THE CORE OF THEIR BUSINESS, THE FOUNDERS OF TANOTO FOUNDATION, MR. SUKANTO TANOTO AND MRS. TINAH BINGEI TANOTO, HAVE BECOME CHAMPIONS FOR SUSTAINABLE NATURAL RESOURCE DEVELOPMENT. THIS BOOKLET CAN HELP THOSE WHO CARE ABOUT INDONESIA'S NATURAL RESOURCES UNDERSTAND MORE ABOUT SUSTAINABLE PRODUCTION IN PANGKALAN KERINCI. HAPPY READING.

01 FEBRUARY 2019

S. Camorio

DR. J. SATRIJO TANUDJOJO CEO GLOBAL TANOTO FOUNDATION









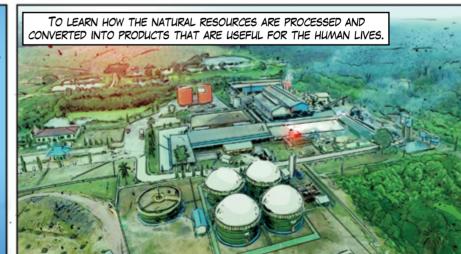


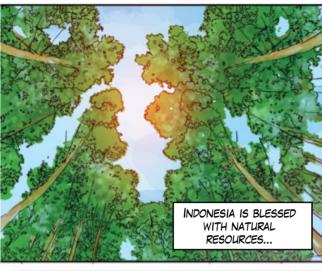




DO YOU KNOW HOW ALL THESE PRODUCTS ARE MADE?

LET'S TAKE A
QUICK FLIGHT
TO PANGKALAN
KERINCI
TOWN SITE IN
SUMATRA..







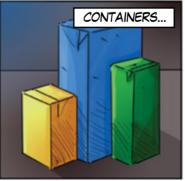






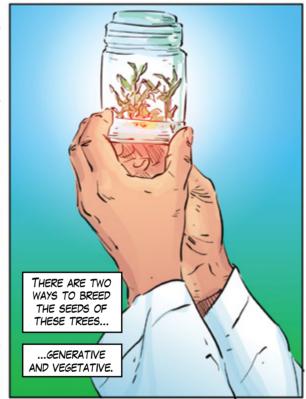




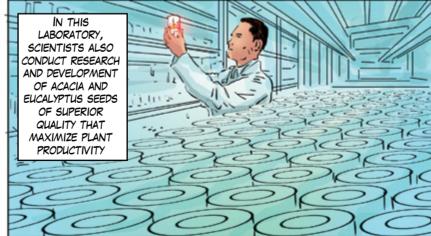
















500,000 ACACIA AND EUCALYPTUS TREES ARE PLANTED EVERY DAY. IT IS THE EQUIVALENT OF 150 MILLION TREES PER YEAR.

CONCESSION **AREA GUIDELINE**

INDONESIA'S MINISTRY OF FORESTRY

CONCESSION **AREAS IN USE AT PANGKALAN KERINCI**

50%

Conservation

and other uses

23% 20% **Local Communities** 27% **Local Communities** Infrastructures Infrastructures Others Conservation and Others 10% indigenous tree species Conservation 70% Industrial Plantations Industria **Plantations**

30% Conservation and other uses

OF THE ONE MILLION HECTARES OF CONCESSION AREA IN PANGKALAN KERINCI, 480,000 HECTARES ARE USED FOR PLANTATION, THE REST ARE RESERVED FOR CONSERVATION. COMMUNITY, AND INFRASTRUCTURE DÉVELOPMENT.

COMPARISON OF HARVEST TIME IN INDONESIA WITH OTHER COUNTRIES. **IN INDONESIA 5-6 YEARS**

IN OTHER COUNTRIES 20-60 YEARS

RAPID TREE GROWTH IS A COMPETITIVE ADVANTAGE FOR INDONESIA

















THE PULP IS TRANSFERRED TO THE BLOW TANK FOR THE CLEANING AND DRYING PROCESSES

THIS IS THE PULP PRODUCED FROM ACACIA AND

EUCALYPTUS TREE.

BLACK LIQUOR IS PROCESSED IN THE EVAPORATOR AND THEN TRANSFERRED TO THE RECOVERY BOILER THAT DRIVES A TURBINE IN A POWER PLANT PROVIDING ELECTRICITY TO ALL MILL AREAS.



IN THE DOWNSTREAM INDUSTRY... PULP IS PROCESSED INTO



A BYPRODUCT OF RECOVERY

BOILER IS A WHITE LIQUOR THAT

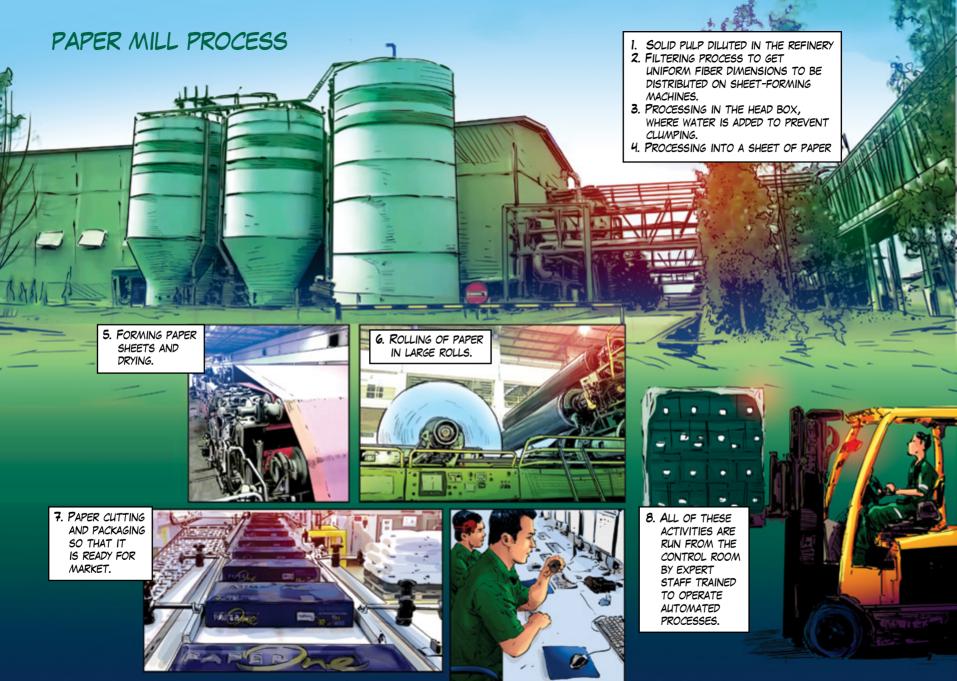
CAN BE REPROCESSED INTO

PULP IN THE DIGESTER. ALL OF

THESE PROCESSES REPEATEDLY

BECOME AN EFFICIENT CYCLES.

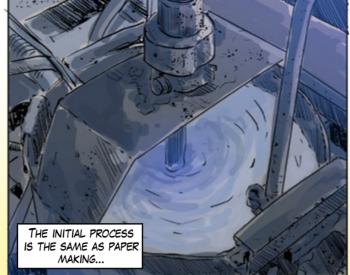
DERIVATIVE PRODUCTS.



RAYON MILL PROCESS

PULP CAN ALSO BE CONVERTED INTO RAYON FIBER (VISCOSE) FOR USE AS A CLOTHING MATERIAL.







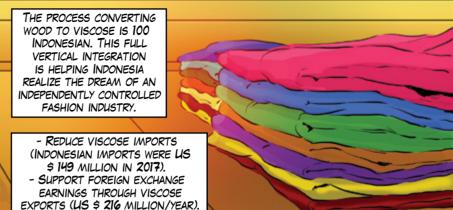


RAYON FIBER FABRICS ARE USED AS MATERIAL FOR VARIOUS FASHION PRODUCTS.

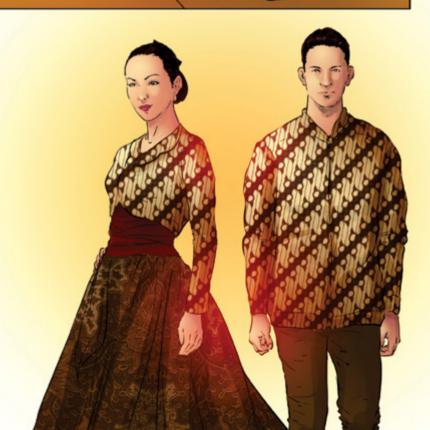
RAYON FIBER CAN BE BLENDED WELL WITH OTHER MATERIALS TO BECOME GOOD QUALITY FABRIC.

> RAYON FIBER FABRIC HAS SEVERAL ADVANTAGES, NAMELY THAT IT IS SOFT AND SMOOTH, NOT EASY WRINKLED, GLOWS NATURALLY AND IS GOOD AT ABSORBING WATER/SWEAT.











FACTS OF THE PULP AND PAPER MILL AT PANGKALAN KERINCI

ONE OF THE MOST EFFICIENT PULP AND PAPER MILLS IN THE WORLD.

85% OF THE ENERGY USED COMES FROM RENEWABLE SOURCES

CONVERTS WASTE FROM PULP AND PAPER PROCESSING INTO ELECTRICITY EQUIVALENT TO 390 MEGAWATTS PER YEAR. 2% (10 MEGAWATTS) OF THE ELECTRICITY IS DISTRIBUTED TO RESIDENTS OF PANGKALAN KERINCI AND THE LOCAL STATE POWER PLANT.

PROCESSES WOOD HARVESTED SUSTAINABLY.



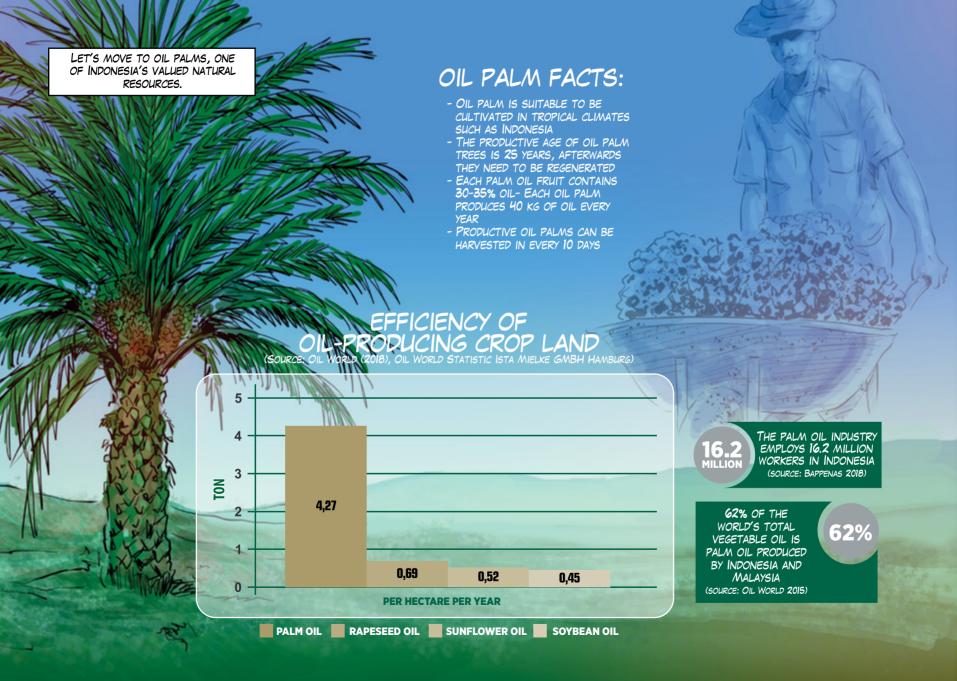
RIAU ECOSYSTEM RESTORATION (RER)

RIAU ECOSYSTEM RESTORATION IS A PROJECT TO RESTORE AND CONSERVE AN AREA OF ECOLOGICALLY IMPORTANT PEAT FOREST IN INDONESIA'S SUMATRA ISLAND. THIS PROJECT BEGAN IN MAY 2013 WITH 20,265 HECTARES AND EXPANDED TO MORE THAN 150,000 HECTARES IN 2015.



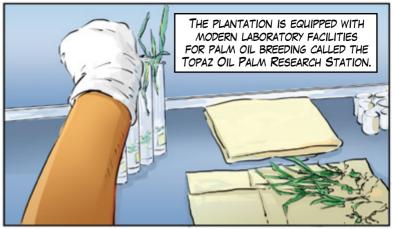
A FOUR-PHASE
APPROACH IS
EMPLOYED TO RESTORE
AND CONSERVE:
- PROTECT
LANDSCAPES AND
NATURAL RESOURCES
FROM DEGRADATION
- ASSESS THE
ECOSYSTEM AND THE
SOCIAL ENVIRONMENT
- RESTORE THE
HYDROLOGY, NATIVE
PLANTS AND WILDLIFE
SPECIES
- MANAGE THE AREA
IN THE LONG TERM TO
MAINTAIN BIODIVERSITY
AND PEOPLE'S LIVES





PRODUCTIVE PALM OIL TREES WITH MAXIMUM YIELDS OBTAINED FROM SUPERIOR SEEDS.





IN THE TOPAZ OIL PALM RESEARCH STATION, 21 EXPERT RESEARCHERS HAVE SUCCEEDED IN CULTIVATING SUPERIOR OIL PALM SEEDS DERIVED FROM A COMBINATION OF SEED TYPES FROM VARIOUS COUNTRIES. PRODUCTION CAPACITY AT THE OPRS
IS 25 MILLION GERMINATION SEEDS
PER YEAR, MAKING IT ONE OF THE
LARGEST SELLERS OF OIL PALM SEEDS
IN INDONESIA.





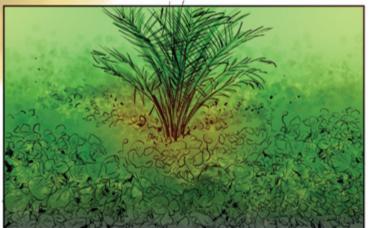








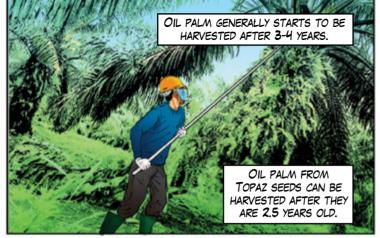
RAT PEST CONTROL USES OWLS AS NATURAL PREDATORS



TURNERA SUBULATA PLANTS ARE USED TO CONTROL CATERPILLAR PESTS THAT ATTACK THE LEAVES OF THE OIL PALM.



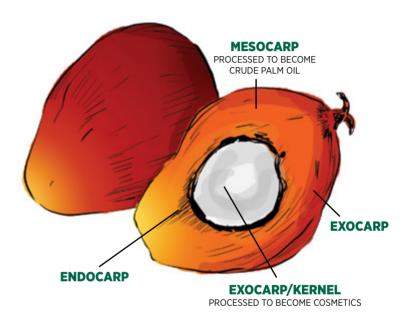
LOCAL HOUSEWIVES IN THE SURROUNDING AREA ARE EMPOWERED TO EARN ADDITIONAL INCOME.



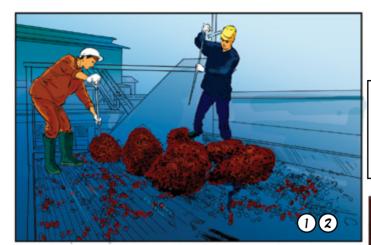




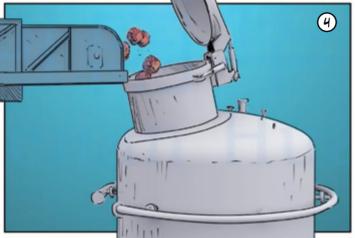
THE OIL PALM FRUIT











THE STAGES OF PROCESSING FRESH FRUIT BUNCHES INTO CPO

- 1. FRUIT IS SORTED BY ITS MATURITY AND QUALITY.
- 2. THE SPLITTER, PUNCHES HOLES IN THE OIL PALM FRUIT TO REDUCE THE BOILING TIME AND TO ENSURE THE FRUIT IS BOILED EVENLY.
- TO STOP THE GROWTH OF FREE FATTY ACIDS.
- 4. LOOSE FRUIT ARE SEPARATED FROM THE BUNCHES BY THRESHING.
- 5. PRESSING EXTRACTS OIL FROM THE FRUIT.
- 6. CRUDE PALM OIL (CPO) IS PURIFIED AND DISTRIBUTED THROUGH PIPES.
- 7. CPO IS READY TO BE MARKETED
- 3. THE PALM FRUIT IS BOILED IN A GIANT TUBE 8. ALL PROCESSES MAKE USE OF SOPHISTICATED AUTOMATION TECHNOLOGY TO PRODUCE QUALITY CPO FROM SUPERIOR SEEDS.



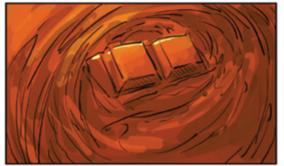








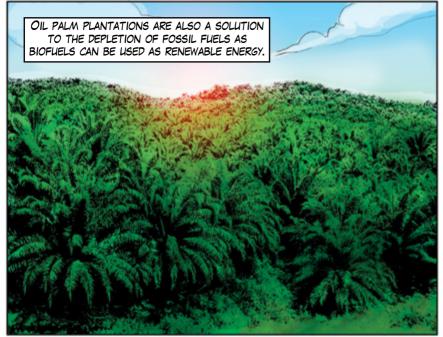






THROUGH FURTHER PROCESSING, CPO
CAN BE CONVERTED INTO INGREDIENTS
FOR COOKING OIL, MARGARINE, WHITE
BUTTER, ICE CREAM, NOODLES, CHOCOLATE,
CONFECTIONERY, SOAP, DETERGENT,
SHAMPOO, FABRIC SOFTENER, LUBRICANT,
AND MUCH MORE.



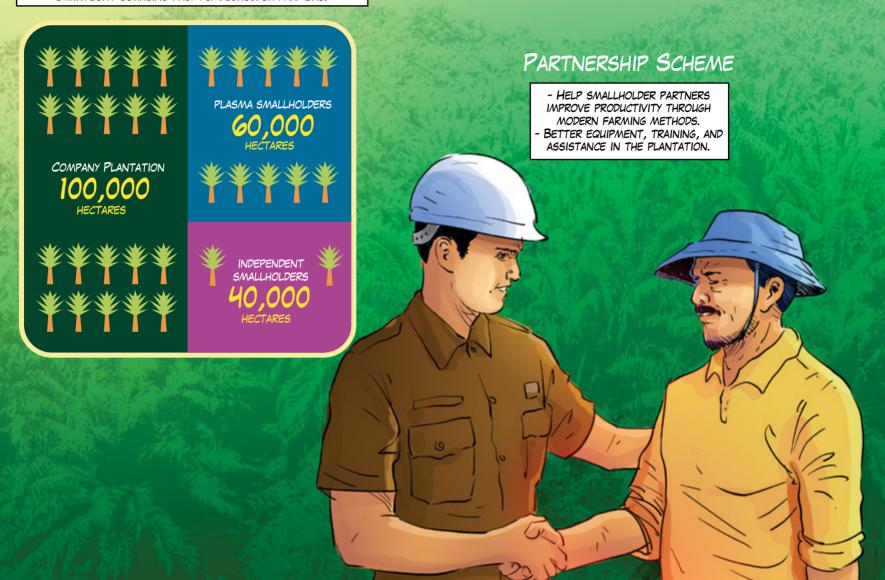








PARTNERSHIPS WITH LOCAL FARMERS ARE VERY IMPORTANT. A ONE TO ONE COMMITMENT PROGRAM IS APPLIED WHERE EACH HECTARE OF SOURCING FROM COMPANY PLANTATIONS IS MATCHED WITH EQUIVALENT SOURCING FROM SMALLHOLDER FARMERS.







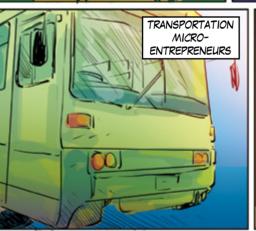








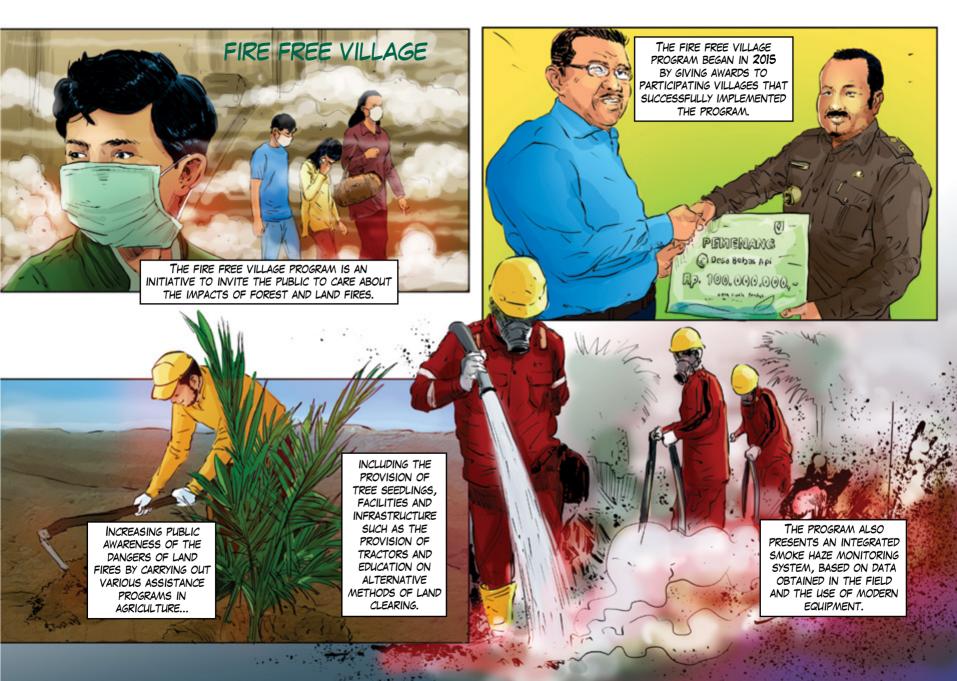
DEVELOPING INTEGRATED FARMING SYSTEMS TO IMPROVE SKILLS IN AGRICULTURAL ACTIVITIES, SUCH AS HORTICULTURE, PLANTATION MANAGEMENT, LIVESTOCK REARING, AND AQUACULTURE.







SUPPORTING THE DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES FOR THE COMMUNITY. SME PROGRAMS ARE TARGETED TO BUSINESSES THAT CONNECT TO COMPANY OPERATIONS, AS WELL AS BUSINESSES THAT ARE NOT RELATED TO THE COMPANY.



TANOTO FOUNDATION

OUR CORE BELIEF

QUALITY EDUCATION ACCELERATES
EQUAL OPPORTUNITY

OUR CONVICTIONS

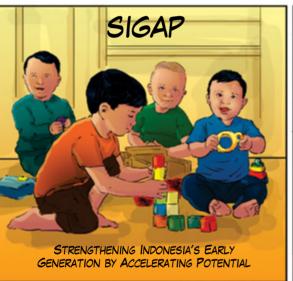
- REALIZE PEOPLE'S FULL POTENTIAL
 - ENHANCE COMMUNITIES - IMPROVE LIVES
 - LEVERAGE PARTNERSHIPS

OUR MISSION

WE HARNESS THE TRANSFORMATIVE POWER OF EDUCATION TO REALIZE PEOPLE'S FULL POTENTIAL AND TO IMPROVE LIVES

OUR COMMITMENTS

- IMPROVING HUMAN CAPITAL THROUGH LEARNING ENVIRONMENTS - BUILDING AND EMPOWERING FUTURE LEADERS TO ACCELERATE POSITIVE
- CHANGE FOR COMMUNITIES
 ADVANCING MEDICAL RESEARCH AND SCIENCES FOR HEALTHIER LIVES
- APPAINTING MEDICAL RESEARCH AND SCIENCES FOR FICALIFIER DIVE







OUR INTENT

- SIGNIFICANTLY REDUCE STUNTING IN INDONESIA
- ELEVATE INDONESIA'S GLOBAL RANKING IN EDUCATION
- ACCELERATE DISCOVERY AND APPLICATION OF ASIA-RELEVANT MEDICAL INTERVENTIONS
- CREATE STRONG LEADERS

Every person should have the opportunity to realize his or her full potential.

-Sukanto Tanoto and Tinah Bingei Tanoto-



DID YOU KNOW HOW THE USEFUL ITEMS IN OUR DAILY LIVES, SUCH AS PAPER, TISSUE, CLOTHING, COOKING OIL, BUTTER, AND BIODIESEL ARE PRODUCED? THESE ITEMS ARE PROCESSED BY DEVELOPING INDONESIA'S NATURAL RESOURCES LEVERAGING COMPETITIVE ADVANTAGES THAT OTHER COUNTRIES DO NOT HAVE. MODERN. COMPLEX AND INTERESTING PROCESSES LIE BEHIND THE MAKING OF THESE PRODUCTS. BY READING THIS BOOK, YOU WILL:

- LEARN THE PROCESS OF MAKING PULP AND ITS DERIVATIVE PRODUCTS. - LEARN THE PROCESS OF MAKING CRUDE PALM OIL AND ITS DERIVATIVE PRODUCTS. - BEST PRACTICES IN PULP AND CRUPE PALM OIL PRODUCTION THAT ARE SUSTAINABLE AND IN LINE WITH THE NEEDS OF NATURE AND THE SURROUNDING COMMUNITY.

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